

The Embeddedness of Collective Action in Nepalese Community Forestry

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Abstract Collective action by local communities has been recognised as crucial for effective management of natural resources, particularly the management of forests in rural settings in developing countries. However, the processes and outcomes of collective action in forest management are often analysed through a narrow rational choice model, ignoring the impacts of wider social, political and economic processes in conditioning peoples' decisions to act (or not to act) collectively. Optimistic assumptions are made for collective action being instrumental to enhance both social and ecological outcomes, but there is a paucity of empirical evidence on how and why the condition of forests has improved (or deteriorated) under collective action, and what impacts the change in forest condition has on various groups within local communities. This study critically examines the emergence, evolution and outcomes of collective action in a case of community forestry in Nepal. A mix of qualitative and quantitative methods has been used to collect primary data from the forest, households, key informants and focus groups. The emergence and outcomes of collective action is found to be embedded in social, economic and political relationships, where powerful actors control the use of forests in order to ensure conservation, thereby resulting in the underutilisation of forest products. Poor users, who depend heavily on forests, are found to be worse off economically under community forestry, but still engage in collective action for a variety of socio-political reasons. This contradicts the conventional wisdom which assumes that people only cooperate when they benefit from cooperation. It is

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concluded that a deeper understanding of the embeddedness of community forestry is needed in order to achieve the potential of collective action.

Keywords Community forestry · Forest users groups · Ideological assumptions · Equity

Introduction

The intrusive natural resource management strategies and planned development in many developing countries over decades has resulted in degradation of resources and deterioration of community livelihoods. These poor outcomes have forced policy-makers and scholars to reconsider the role of communities in resource use and conservation (Agrawal and Gibson 1999). Empirical evidence has been put forward that local user groups are capable of managing natural resources through collective action (Ostrom 1990; McCarthy et al. 2004). Collective action is believed to promote progressive social change that brings about meaningful participation, decentralisation and conservation (Chambers and McBeth 1992).

Collective action is defined differently in different situations. The Oxford Dictionary of Sociology defines collective action as the action taken by a group in pursuit of members' shared interests (Marshall 1998). There are many definitions, but what most definitions have in common is that collective action requires the involvement of a group of people, it requires a shared interest within the group and it involves some kind of voluntary common action that works in pursuit of that interest. However, members of a community have multiple interests (Agrawal and Gibson 1999), and even a common interest does not necessarily produce collective action (Heckathorn 1996). A few people can still dominate decisions in collective action processes, while the poor and minorities may be forced to implement decisions. In this paper, collective action is used to describe the processes of voluntary decision-making by community forestry groups, and the implementation of agreed decisions, including conforming with restrictions on forest access, use and control.

Increasing attention is being paid to collective action in community forestry (CF)¹ literature. However, two critical issues are ignored. Firstly, at the theoretical level, many analyses of collective action have usually been subjugated by a rational choice model to a narrowly focused approach based on a prior supposition of atomistic behaviour, zero sum interactions and human rationality within socially artificial boundaries (Petrzelka and Bell 2000; McCarthy et al. 2004). These conditions have predicted insufficient cooperation and hence tragedy in resource management. Optimism regarding the processes and outcomes of collective action has been tempered by the reality of rigid and inequitable local social mechanisms, structures and relations (Mosse 1997; Ribot 2002). Community forestry exists within a social system, and it is not possible to understand the emergence and

¹ Community forestry is defined here as the management and control of forests by groups of local people who live in and around the forest, and are formally given both the authority and responsibility by the state officials to control the access and use of forest resources.

dynamics of collective action in community forestry without a sense of social, economic and political relations in which individuals and groups are embedded. The policies and practices of CF have increasingly been accepted as suitable for the sustainable management and utilisation of forest resources (Pagdee et al. 2006). The recognition of collective action is based mainly on an assumption that the involvement of local communities in the management of forests can improve the use and condition of forests. However, collective action does not necessarily improve the use and condition of forests, and many scholars question the processes and impacts of community involvement in resource management (Berkes 2004; Mahanty et al. 2006).

This paper critically examines the processes and outcomes of collective action by Pragatisil FUG² in Nepal in the use and conservation of forests. It seeks to answer the following questions: How and why has collective action emerged in Pragatisil? What are the impacts in terms of forest conservation, and why has the condition of the forest improved (or deteriorated)? What are the benefits of CF and why are these benefits realised (or not realised)? Finally, is the economic benefit (mostly from forest products) from CF a key driver for continued collective action? In the next section, the theory and empirical evidence of collective action is reviewed, followed by a discussion of Nepalese CF policy. The research method is then outlined. The case study of Pragatisil Community Forest is then presented, highlighting how collective action emerged, and what the outcomes are in terms of forest use and conservation. Finally, collective action is critically analysed, including the underlying reasons for forest underutilisation and lack of benefits to Pragatisil FUG, particularly for the poorer groups.

Collective Action and Sustainable Community Forestry

Collective action has always been fundamental for human society and plays a crucial role in sustainable community forestry. However, it cannot be assumed that individual forest users will cooperate to manage and use forest resources in a sustainable way. There are contradictory theories on collective behaviour of local people involved in natural resource management. It has been argued that self-interested individuals are often unable to cooperate because to do so may actually harm individual interests (Olson 1965; Hardin 1968). Olson (1965, p. 2) argued that ‘rational self-interested individuals will not act to achieve their common or group interest’. Similarly, Hardin (1968) argued in his influential paper, *The tragedy of the Commons*, that the individual’s rational action results in collectively irrational outcomes, leading to over-exploitation of the resource. It was thought that when individuals share ownership of resources, they are prone to over-use those resources; hence self-interested rational individuals will not cooperate.

² FUG (Forest User Group) in community forestry in Nepal refers a group of forest users living in and around the forests, who organise themselves to make and implement management decisions in regards to access, use and control of forest resources.

Many writers have responded to the ‘tragedy thesis’ by arguing that the management of ‘common’ resources by their users can be an appropriate system for overcoming ‘the tragedy’ (Ostrom 1990; McCarthy et al. 2004). Advocates of ‘common property’ have argued that the tragedy of the commons results not from the sharing of the rights, but from the absence of rights (Ciriacy-Wantrup and Bishop 1975). Geographers, political scientists and anthropologists have identified many attributes that are likely to be associated with the sustainable management of resources. For example, Ostrom (1990) outlined a list of eight design principles—including clear boundaries of users and resources, and congruence of rules with local conditions—which are associated with the establishment of organised strategies for managing common-pool resources. Similar lists have been provided by Wade (1988) and Baland and Platteau (1996). A common underlying argument is that individuals are able to act collectively and manage natural resources effectively.

These design principles and the theory of common property are popular, but they are criticised as being prescriptive blueprint criteria for success (Steins and Edwards 1999), too focussed on internal dynamics of resource management while ignoring the wider political economy (Klooster 1997), and inattentive to issues of conflict and power (Mosse 1997). A fundamental criticism of the ‘tragedy thesis’ and also the ‘theory of common property’ is that they both draw upon a narrow rational choice tradition—a model that assumes individuals are rational actors who behave in their best self-interest to maximise material economic gain (Petrzelka and Bell 2000; Granovetter and Swedberg 2001). Trust, social norms and power all influence actions and thereby offset pure self-interest (Fisher 1994; Mearns 1996; Petrzelka and Bell 2000). Collective action and resource management are better understood by analysing them as embedded in changing social, economic and political processes.

The concept of embeddedness was popularised during the 1950s in economic sociology by Karl Polanyi, who argued that ‘man’s economy, as a rule is enmeshed in his social relationships’ (Polanyi et al. 1957, p. 46). Granovetter (1985) revitalised the concept and argued that the analyses of economic behaviour should focus on the social dimensions of that behaviour, suggesting that all economies are embedded in other and larger structures, and that cultural systems differ in the extent to which economic transactions are embedded in social life and constructs of culture. The concept of embeddedness can facilitate the analysis on how collective action and CF are conditioned by social, economic, political and ecological processes at various levels.

There is a growing body of empirical literature on community management of natural resources (Ostrom 1990; Baland and Platteau 1996; Agrawal and Gupta 2005). Recent studies analyse the issues of equity (e.g. Mahanty et al. 2006), local institutions (e.g. Adhikari et al. 2007) and property rights (Knox and Meinzen-Dick 2001). A few studies provide in-depth explanations on community-based resource management in terms of culture (Maskey et al. 2006), society-state relations (e.g. Wollenberg et al. 2006), local participation (e.g. McCarthy et al. 2004) and collective action methods (Meinzen-Dick et al. 2004). However, these studies remain largely reliant on the reductionist, rational choice model in the analysis of resource management systems.

Community forestry is justified for effective conservation of forests and enhancement of people's livelihoods, relative to the state-controlled system or privatised system of management. However, it cannot be guaranteed that a community will always conserve their forests (Agrawal and Gibson 1999; Berkes 2004). Empirical evidence does exist for community management being effective for the conservation of forests (e.g. Yadav et al. 2003; Sunderlin et al. 2005), but the achievement of conservation is generally linked with the force employed by the state against the will of communities (Peluso 1993). The reason is probably that forest agencies are still evaluated for their success in forest conservation, not in terms of controlled use (Wood et al. 1995). Community forestry is assumed to be better for biodiversity conservation than single-purpose industrial forestry (Brown 1999), but there is little empirical evidence to substantiate this claim. While the benefit stream forms a major element of CF, underlying issues of power and control are highlighted as instrumental for provisions relating to extraction and distribution of benefits (Fisher 2003; Ribot 2004). Under the banner of devolution, forest management rights are transferred to the local bodies or elite members, which in practice are often appointees or extensions of the central government and are consequently more responsive to the government than to the local people (Ribot 2002). Numerous writers have suggested that powerful community elites capture the decision-making and implementation processes of CF, resulting in an inequitable distribution of benefits to communities (e.g. Malla et al. 2003; Iversen et al. 2006).

Community Forestry in Nepal

Despite Nepal³ being a small, landlocked kingdom located between two giant neighbours (India and China), it has long been recognised as the country of Mt. Everest, the birthplace of Buddha, and now also as a world leader in CF. The CF policy in Nepal emerged in the 1970s after failure of the previous forest policy to halt deforestation, and by a realisation of the need for a forest management responsive to, and built upon, local needs and indigenous systems. In 1976, the *National Forestry Plan* introduced a new policy to hand over responsibilities for forest management to local political bodies, with forest protection being a major policy aim. The externally supported forest policy, focussed on plantations and protection of forests, did not receive much support from local communities (Pandit and Thapa 2004). In 1989, there was a major policy shift from early community forestry through local political structures towards the *user group* approach, based more on natural, traditional local use practices, through implementation of the *Master Plan for the Forestry Sector*. The Plan made provisions for the handing of control of forests to local communities organised in the form of Forest User Groups (FUGs), with retraining of staff of the *Ministry of Forest and Soil Conservation* for their new roles as advisors and extensionists (HMGN 1989). The *Forest Act* was

³ Nepal is divided into three physiographic regions, namely the Terai (elevation 59–610 m), The Middle Hills Region (610–4,877 m), and the Mountains or Himalayas (4,877–8,848 m). Administratively, the country is divided into five development regions, 14 zones, 75 districts, 58 municipalities and 3,912 Village Development Committees (VDCs).

revised in 1993 and regulations were gazetted in 1995 for the purpose of providing a legal framework for handing over the forests to FUGs, while operational guidelines were provided to field staff on how to facilitate the initiation, establishment and implementation of CF. Processes were outlined for forming FUGs, making and implementing decisions, and preparing the local Operational Plans by the users themselves to manage forests and ensure livelihood benefits. The FUGs were given full ownership of all forest products, while the state retained the land ownership. The current status of CF in Nepal is summarised in Table 1.

The *Forest Act 1993* was amended in 1998 to require FUGs to submit annual reports describing the forest activities performed, the condition of forests and the status of the FUG's fund, to the District Forest Officer (DFO) (Kanel 2001). The new provisions also empower the DFO to penalise FUG committee members for offences relating to CF activities, and require FUGs to spend at least 25% of their income on forestry development. In 2001, the government drafted the *Forest Bill* aimed at collaborative forest management and sharing of revenue, but the *Bill* failed to receive approval from the parliament as a result of huge opposition by the forest users. Despite CF being a major focus in Nepal, the local communities are now facing increasing challenges, mainly due to attempts by the forest bureaucracy to control the ways forests are managed and used.

A major challenge for local communities is to conserve the forests and at the same time achieve sustainable benefits. Empirical evidence suggests that forests have been better protected by communities than by the state (e.g. Maharjan 1998; Dougill et al. 2001; Dev et al. 2003). However, the improvement of forests is attributed to the FUGs being focussed on forest protection, rather than utilisation (Springate-Baginski et al. 2003). Critics argue that protection-oriented forest management has been adopted due to the conservation interest of the state, with the staff from the Department of Forests transferring management responsibilities without devolving meaningful authority (Fisher 2000). The mode of operation of DFOs has not changed substantially. Many studies demonstrate that due to the protection focus of management, CF has had limited benefits to communities (Malla 2000; Shrestha 2005; Adhikari et al. 2007). Sometimes, CF has increased forest management, adversely affecting the livelihoods of women and poor households (e.g. Malla et al. 2003; Timsina 2003). Wealthy and higher caste people (i.e. elites) have captured the decision-making and implementation powers, resulting in

Table 1 Status of CF in Nepal

Feature	Status
Number of FUGs formed	14,258
Forest area under the control of FUGs (ha)	1,187,023
Potential CF area identified (ha)	3,551,849
Total forest area (ha)	6,306,000
Percentage of forest land under the FUG management	20.5%

Source: CPFD (2006)

inequitable decision-making processes and distribution of outcomes (Mahanty et al. 2006; Iversen et al. 2006).

Research Method

Selection of the Case Study Location

Pragatisil CF from Kaski district in Nepal (illustrated in Fig. 1) was selected for the detailed study. Nepalese CF is interesting because it is large in scale, supported by legislation and often regarded as one of the most progressive forest policies implemented in one of the poorest and most environmentally sensitive countries in the world. Kaski district, which is approximately in the geographical centre of Nepal, is in the mid-hill region in which CF has been most widely implemented. Pragatisil CF comprises a group of people with diverse social-cultural background, economic grouping and ethnicity, who seemed to be working together effectively to protect a group of five scattered forests. Conflict has been a characterising feature in the history of collective management of forests in Pragatisil, but the FUG was regarded as being successful by many users as well as by the DFO of Kaski. The DFO awarded this FUG the first prize among FUGs in Kaski in 2000, in recognition of its performance in forest management.

Data Collection Method

An in-depth case study was conducted, the method being influenced by key concepts developed using Participatory Rural Appraisal (Chambers 1994) which was used to draw on the knowledge and skills of rural people in the analysis of their local

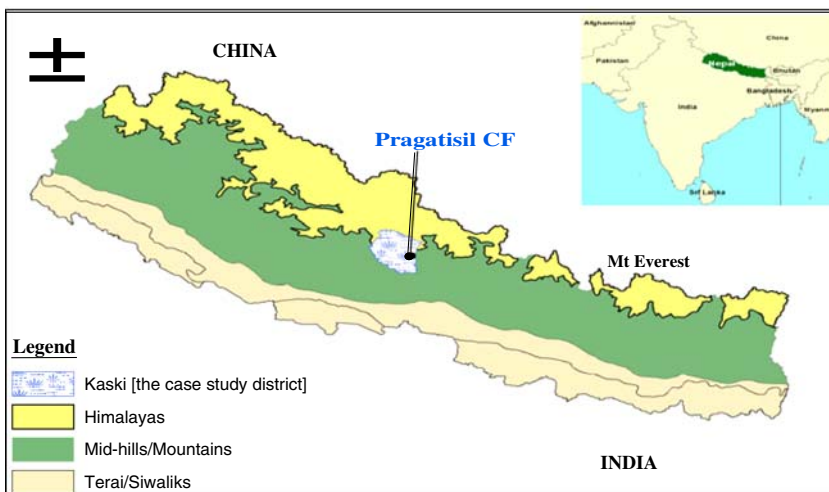


Fig. 1 Map of Nepal showing the case study district of Kaski and Pragatisil community forestry

resources and livelihoods. Triangulation of sources and methods was applied, to minimise biases and maximise the representation of diverse sets of contextual factors. Indirect sources were used to gather data on CF from the records maintained by the households, FUG Committee and publications of government and non-government organisations. Direct collection of data was carried out by using a mix of qualitative methods—including semi-structured interview (SSI), group discussions and participant observation—and quantitative methods including a household survey and rapid forest assessment (RFA).

Participatory rural appraisal was applied to select a sample of households for the household survey. A list of five key FUG members was randomly selected from the overall list of 290 households provided by the Village Development Committee (VDC). The selected members were first given a list of all member households and asked to categorise the households into social, economic and ethnic groups using their own criteria. They grouped all households in three categories (poor, middle wealth and richer), based on their three key socio-economic attributes (food security, land and livestock ownership, and occupation of the household head). Proportional stratified random sampling was used to select 29 households (10 poor, 10 middle and 9 richer) from the total of 290 households to carry out the household survey. Data were collected relating to: demography; households' forest product needs and products received from CF; their views on the past, present and future of collective action; and their involvement in and satisfaction with CF.

Five FUG members (not overlapped with sample households) were selected purposively for SSI, representing poor, women and minority groups, and were asked questions relating to the policies and politics of CF and collective action. Two group discussions, one before and one after the SSI, were organised with the five respondents selected for SSI, to discuss the key issues identified during the household survey.

The diversity of forest condition and the behaviour of local people were observed by the researcher, who lived in the community for 4 weeks. The views on the past, present and future of CF and the factors shaping these views were investigated through participant observation. Each night, a narrative description of the interaction with villagers was written after returning to the field residence.

Rapid Forest Assessment (RFA) was carried out to assess the condition of forests and the potential availability of forest products. Before this assessment, the pattern of forest cover change was determined from the previous forest assessments conducted by the DFO Kaski. With the help of forest users and DFO staff, the appraisal of forest condition was then carried out using stratified random sampling of the forest on the basis of the types of regeneration, height of canopy and extent of harvesting. Three rectangular plots, each of 100 m², were established, distributed within the forest so as to capture plantations, recently harvested sites and dense forest with mature trees, to represent the diversity of forest types. The number of seedlings was counted and recorded. The diameter at breast height (1.3 m) of saplings (dbh between 4 cm and 10 cm), poles (10–30 cm) and trees (more than 30 cm) was measured and the numbers counted. Villagers and DFO staff provided a historical account of the sites, and also helped to identify species and estimate heights. The volume, density and diversity of forest plots were calculated, and the

condition of the forest was observed, all data being recorded in a field book. The results were compared with those of previous assessments and villagers' views on past and current forest condition.

Collective Action in Pragatisil Community Forestry

Pragatisil FUG manages 57.74 ha of broadleaved forests scattered in five patches. Three patches of natural forests are in the hills north of the Prithivi Highway, while two plots of plantations are on the bank of Seti River. The highway runs through the forest, connecting Pragatisil with the capital, Kathmandu, and the second largest city of Nepal (Pokhara) which is about 10 km west from Pragatisil.

The majority of residents in the 290 Pragatisil FUG households are migrants who are generally illiterate and landless poor and of low caste groups working as labourers in the city. The minorities are the traditional inhabitants (belonging to the higher *Brahmin* and *Chettri* caste groups) who own most of the agricultural land, and control socio-economic and political activities of the community. The population is rapidly increasing because of the proximity of Pragatisil to Pokhara and relatively low land price. Pragatisil FUG has a transitional agrarian economy, with many households gradually leaving agriculture and seeking business opportunities and overseas employment. The higher caste groups are dominant and exploitative in Pragatisil, resulting into a deep social division within the community.

The History of Collective Action in Pragatisil Forest Management

Reviews of publications and interviews with respondents revealed that the nationalisation of forests in Nepal in 1957 which aimed to protect the forests had a negative effect on the forests of Pragatisil. Following the *Nationalisation Act 1957*, local people cut trees and encroached forests quickly, fearing the state would lock up forests permanently. Expansion of the forest administrative bureaucracy in Pokhara in 1960 and development of roads and other infrastructure also contributed to deforestation. By 1976, cadastral survey clearly categorised Pragatisil as shrub land. The northern part of the forest was however less degraded than in the south because of the recognition of a Hindu goddess temple, *Kalika*. The first plantation program was introduced externally in 1976 by *Queen Aishwarya* on the occasion of *International Women's Day* to protect the Pragatisil settlements and land near the Seti river bank from massive flooding. In 1978, traditional inhabitants formed a forest protection committee to control forest encroachment and deforestation. The supra-legal committee existed informally and worked well, but it had to cope with frequent harassment from DFO staff over controlling the use and management of forest. After the implementation of a new forest policy in 1989 and restoration of democracy in 1990, forest users formed an ad hoc committee in early 1992 and requested the DFO to recognise the existing committee and hand over the forest as community forest. However, SSI respondents said that the previous committee was undermined by the DFO. A new committee was imposed justifying the need to

include poorer groups into the committee, but the influential positions still remained with the traditional elites. Pragatisil Community Forest was officially handed over by the DFO in 1993. The use and management of forests are now enmeshed in conflicts of access, use and control of forests between poorer groups and by rules imposed by the FUG committee and the DFO staff.

How and Why Collective Action Emerged in Pragatisil

Discussions with villagers revealed that collective action emerged in Pragatisil for three key reasons. Firstly, the *Kalika* temple located within the forest meant that people who were Hindus collectively protected the forest surrounding the temple out of respect for their religion and god. There was a belief that cutting trees would incur *Kalika's* anger, which might bring imminent disaster. Secondly, because the Monarchy in Nepal is viewed as a divine institution, people at Pragatisil were inspired and felt obliged to follow the initiatives of the Queen who established the plantation. Thirdly, a practical reason for the emergence of collective action may have been to respond to land encroachment by the *Sukumbasi*.⁴ As the Prithivi Highway was completed, the highway labourers and other landless people occupied the surrounding land. Because the area was close to Pokhara, which is a major tourist destination in Nepal, it was attractive for many *Sukumbasi* to settle in Pragatisil and work in the tourism industry. New migrants, as well as previously settled migrants, gradually encroached on the forests and even threatened areas surrounding the temple. Traditional residents were concerned with the way their forests were being encroached, captured and destroyed by the *Sukumbasi*. The national government was struggling to control the *Sukumbasi* problem all over Nepal, and traditional inhabitants of Pragatisil established collective arrangements at the village level for controlling the *Sukumbasi*. This illustrates how collective action in forest protection can emerge as a response to problems brought about by socio-economic change and development initiatives, where such actions are embedded in a wide set of social beliefs and social relations.

The SSI and household survey revealed that the informally organised collective action was subsequently undermined by the DFO. The struggles for the land and forest products intensified as *Sukumbasi* settled in and were able to challenge traditional residents, and the traditional residents devised stricter collective arrangements against the *Sukumbasi*. The *Sukumbasi* openly challenged the traditional users because they did not have close social relationships and did not fear losing anything. Since these new migrants were often industrial labourers, they were not dependent on the traditional wealthy people who only employed labourers for agricultural purposes. Some form of intervention seemed necessary because the control strategy employed by the traditional users created social divisions. Subsequently, the DFO justified the need for new committee as being essential to resolve conflicts regarding who the users were, and what was the boundary of the forest.

⁴ The *Sukumbasi* are generally landless people, who encroach government land (often forests) to construct temporary houses with a view to a permanent settlement.

The group discussions and SSI results also indicate that the imposition of the Pragatisil FUG has mainly served the interest of the DFO, which was keen to ensure protection of timber plantations because they were at an economically profitable stage and ready for harvest to generate state revenue. There was hesitation about transferring use rights over such a profitable tree crop, hitherto solely protected by the DFO, to local users. More importantly, the DFO had to ensure protection of the plantation because it was established by the Queen. The protection-oriented approach established by the traditional users was suitable for the DFO's interest. This had support from traditional users, because they saw it as a reinforcement of their previous strategy. However, the Sukumbasi, who lived closest to the plantation site, posed a great danger and had to be given rights to forest products for the protection to be effective. The DFO therefore included them in the FUG, despite the opposition from traditional users. While the protection-focussed strategy was not favourable for the Sukumbasi, they abided by the new rules because they saw the opportunity to become legitimate users. The imposition of new arrangements and the inclusion of all users were the strategic actions by the state to ensure forest conservation.

The Pragatisil example provides two crucial implications for understanding the emergence of collective action in CF. Firstly, a lack of close social relationships can create social division and conflict, with the divided community becoming vulnerable to imposition of external control. Therefore, a close appreciation of internal social relations is important to understand the emergence (and dynamics) of collective action. Secondly, external intervention is shaped by various economic and non-economic factors, and it mainly serves the external interests. Therefore, external interventions that superficially aim to empower local communities and protect natural resources should be critically analysed for the underlying interests of interventions before they are supported and implemented at the local level.

Impacts of Collective Action in Pragatisil Community Forestry

Collective action by Pragatisil FUG members has resulted in a number of forest management outcomes. The RFA and discussions with villagers revealed that the condition of the forest has improved in terms of the number of trees and the presence of greenery, but the forest is still young, dominated by seedlings (91%, or 16,467 of the total 18,067 observed plants per ha) and poles (7.2%), with few trees (0.2%) and saplings (1.5%). A total of 23 species were found to be present, with a low plant diversity index 0.03 (1 being a forest with maximum plant diversity and zero being a forest with only one species). The crown density is 55%, largely attributed to 1,600 stems per ha (excluding seedlings). Analysis of RFA data⁵ indicates that the forest can potentially supply 24.1 bhari⁶ of foliage,⁷ 83.2 bhari of fuelwood and 1.59 m³ of timber per ha per year. It was estimated that if the forest is

⁵ The basis for the calculation and analysis is reported in Shrestha (2005).

⁶ Bhari is a Nepali term which refers to an average load of forest products that a person can carry (approximately 30 kg) (Malla et al. 2003).

⁷ Foliage and leaf litter are used for animal bedding and making compost manure for crops.

managed scientifically to its potential, each household can receive an average of 4.8 bhari of foliage, 16.7 bhari of fuelwood and 0.32 m³ of timber per year.

To determine whether the potential supply of forest products could meet the needs of the community, discussions were held with sample households during the household survey. The estimated average annual household requirement was 0.46 m³ of timber, 42.9 bhari of fuelwood, 359.3 bhari of fodder and 16.7 bhari of leaf litter. The sample households suggested that about two thirds of their demand is expected from CF, but it was estimated that the average annual household supply from CF was only 0.10 m³ of timber, 10.3 bhari of fuelwood, 14.3 bhari of fodder and 7.3 bhari of leaf litter per year. Clearly, the quantities of products which will be harvested are far less than what will be needed and what is potentially available, indicating that the needs of people will not be fulfilled while the forest is underutilised.

The household survey, SSI, group discussions and participant observation indicate that the forest condition has improved through CF. As one respondent stated, 'the forest has improved from almost a denuded land, ... users and forest watchers jointly look after the forest to ensure forest protection'. Most users attend meetings and take part in planting and protection activities, because they receive some forest products. Participation in CF has become the norm and people failing to participate have often faced social exclusion in non-CF activities. It was found that the FUG has some critical problems, the majority of respondents being unaware as to how the forest is being managed. Consequently, there are conflicts in forest protection, for which the majority of respondents emphasised the need for hiring workers to look after the forest, called *forest watchers*. Therefore, a joint arrangement of users and forest watchers looking after the forest has been employed, which is effective in forest protection.

SSI respondents and group participants agreed that the FUG member households receive fuelwood, grass and leaf, but the quantities of products are only a small portion of their actual needs and what they expected to be met by CF. Although the distribution of products is supposedly equitable, a poor teashop owner was frustrated with the product distribution rules, viewing these rules as 'unfair because the poor people do not have alternatives to meet their needs, while the wealthy people have a lot of private resources'. A poor woman argued: 'I only need fuelwood, which is insufficient, nothing else. I cannot swap products with other users'. One respondent said: 'the chairman of the FUG committee makes all decisions because he is powerful; he has a support from the DFO'. The majority of poor and disadvantaged respondents highlighted that due to the strict enforcement of rules by the local elites and DFO, they receive a far smaller quantity of forest products now compared to the situation before CF was introduced.

Product harvesting and distribution are found to be driven by the wish of the DFO, not by the collective decisions of the community. Most respondents believed that the DFO is the only source of power, knowledge and finance for CF, and that they do not have any alternative source for support. A common point to emerge from the household survey, SSI and discussions is that the DFO directly or indirectly controls how forests are managed and used. For instance, one respondent stated that 'the ultimate decisions on forest product harvesting depend on the DFO

... the power comes from the ownership of land'. Overall, the survey respondents were unhappy with the DFO controlling the decisions on forest use and management at Pragatisil CF. Income generation and community development are promoted by the DFO and other agencies. However, the SSI respondents suggested that for Pragatisil FUG, the generation of income and community development are limited and the FUG has not realised these activities in practice to the extent that they are promoted in the rhetoric. There was however a strong expectation among the respondents that the CF can generate income. Some respondents were hesitant about cutting trees to generate income because of the fear that the DFO may break the agreement with the users and resume CF control.

Reasons Why the Forests have been Conserved at Pragatisil

Two key reasons are revealed by the study to explain why the forests are well conserved at Pragatisil. Firstly, Pragatisil FUG has employed effective plantation and forest protection measures to conserve the forest. The combined efforts of user group members and forest watchers have been employed to protect the forest. The example of Pragatisil suggests that a uniform system previously employed by the state, if imposed on the FUG, is less likely to be effective in conserving and sustaining use of forests because the feasibility and effectiveness largely depend on the FUG's specific socio-economic and ecological contexts. The forest is well conserved because it has not been actively utilised. The harvest of forest products is far less than what is available. Underutilisation of community forests in Nepal has also been identified by previous studies (e.g. Springate-Baginski et al. 2003). The implication of underutilisation is that there are foregone opportunities from sustainable harvesting, processing and marketing of both timber and non-timber forest products.

Some critical lessons can be learnt from the example of forest conservation at Pragatisil. One lesson relates to the question of 'What does it mean to have an improved condition of forests for Pragatisil FUG members?' At a basic level, it may mean that the ability of forests to supply products has increased, and thus users are likely to obtain more products to meet their needs. However, as RFA results indicate, the forest has not reached the stage where it can meet the demand of timber, fuelwood and foliage of all users, even if actively utilised. The match between the demand and availability of the various forest products also varies across locations within the case study area, and changes over time. Therefore, the popular assumption of an improved forest being able to produce surplus forest products, which can be sold to generate income for the FUG, is seriously flawed.

Another lesson is that an improved condition of forests under community forestry may be better for biodiversity conservation than single-purpose forest management. The example of Pragatisil demonstrates that it has low species diversity, and the trees and poles are dominated by a few species promoted by the FUG for their particular social, economic and political values. The community forest in Pragatisil may not be ideal for biodiversity conservation because as most respondents said, they are likely to retain only those species which are most valuable for them. Considering the increasingly active management of forests under CF with a specific

selection of species conditioned by social, economic and political values, CF is unlikely to focus on biodiversity conservation. However, given that the community forest was established on a degraded area of land at Pragatisil in the first place, it should be judged in comparison to what was there before, not against some theoretical ideal.

Reasons Why CF Benefits have been so Limited

The utilisation of forests and livelihood benefits are the fundamental elements of CF and are seen as an underlying part of the rationale for CF. However, the results from the household survey, SSI and group discussion indicate that only limited livelihood benefits arise from CF, and some poor users have become worse off. This affirms the findings of Malla et al. (2003) that contributions from Nepalese CF have not been substantial, particularly for poorer groups.

A simple explanation for the why benefits of CF have been so limited is that the forest is being underutilised. The FUG members do not harvest all potentially available forest products perhaps because they may be lacking necessary knowledge, skill and confidence to use and conserve the forest in a sustainable way. However, an underlying reason for limited benefits from CF may be that the users cannot use the forest at their will. The politics of forest management that involve the persistent control by the DFO to meet its conservation interest deprive users of any real authority to harvest forest products. While there is a policy commitment to give full use rights to FUG members and for them to have some power to make decisions, these decisions are seriously constrained by various rules and circulars, and by the overriding power of the Department of Forests. Therefore, as Fisher (2000) argued in a critique of CF, the issue of limited benefits from CF is based on flawed arguments because the problem is largely about the control of forest resources, not about the limited flow of benefits. There is a need for a genuine devolution of power to local levels.

The politics leading to underutilisation of forest in Pragatisil have been supported by the elite members who often hold the FUG committee positions and hijack the FUG agenda. Elites dictate the protectionist ways of forest management because of their limited dependence on communal forests, the protection of which has little impact on them. For elites, managing protection is easier than managing controlled use. Accordingly, institutions are devised in such a way that a limited quantity of forest products is extracted, mainly as a part of forest improvement, not to meet user needs. Consequently, most users are deprived of their basic forest product needs and are constrained by the rules administered by the FUG committee. CF may meet the conservation objectives, but only at the expense of poor users who are mostly dependent on forest products.

The example of Pragatisil demonstrates a critical aspect of CF being less beneficial to many forest users. An implication of this study is that the users do not have power to demand and receive CF benefits. There have been many changes in terms of techniques of CF and training provided for users, but the underlying control structures are largely sustaining, as are the lack of benefits to communities (Fisher 2003). In addition, the emergence of CF has not brought about the shift in decision-making

assumptions underlying the state as controller. Instead, custodial ideas of the DFO making the decisions for people (often covertly) have simply been reinforced in the new CF policy context.

Does Collective Action Continue to Exist in Pragatisil Forest Users Groups?

Despite the limited contribution of CF, the majority of users in Pragatisil attend meetings, participate in forest protection and management activities and comply with rules. This means that collective action continues to exist because it allows the forest to provide at least some products, which are important for users' livelihoods. Despite the limited flow of products, community forest management provides greater benefits than available alternatives, and therefore the situation under CF has been perceived to be better than the previous situation. Also, users have a high anticipation of future benefits in terms of generating income and carrying out community development through the sustainable use of forest. Another reason for continued participation is that interdependent forest users are influenced by the benefits of participating in the process of action such as maintaining social relationships. Finally, people continue to cooperate in CF because of the politics that force them to do so. Contrary to the common assumptions that individuals will act collectively to receive greater benefits, the evidence suggests that individual benefits are not the sole, or even the primary, determinant for collective action. The case study reveals that some individuals act collectively because they want to keep their sense of social belonging, while others, particularly the poor, are forced by socio-political circumstances to continue in collective action. This study refutes the rational choice literature and supports the new economic sociology approach that collective action and resource management are embedded in social relations.

Conclusion

The analysis of the complex situation in Pragatisil FUG in the mid-hills of Nepal shows that the condition of the forest has improved due to effective protection systems employed by users, which are associated with specific historical, socio-economic and political processes. It is important to understand the continuation of collective action, based on the assumption of widespread benefits, given that benefits of community forestry in Pragatisil are limited despite the improvements in forest quality. Further, these benefits are inequitably distributed, in that the needs and interests of poor users—who are highly dependent on forest products—are largely ignored by the DFO and local elites. Limited benefit flows have frustrated forest users, but they continue collective action for a variety of social, economic and political reasons. Peoples' motivations to act collectively are therefore not solely, or even principally, driven by the economic benefits of CF but by diverse non-economic factors. Forest users have acted collectively, against their economic interests, because social norms and unequal power relations force them to do so. Social ties and economic interdependence influence actions and thereby offset pure self-interest. Therefore, peoples' motivations cannot be reduced to economic costs and benefits. This challenges the rational choice tradition followed by many

resource economists and supports the new economic sociology proposition of economic action being socially situated.

The CF policies and practices relating to collective action have been progressive in that they have given a security of rights and legitimacy for users to access and utilise the forest. However, the policies and practices have not brought about the shift in decision-making attitudes and actions of the state as controller to the local elites as friends of the authorities. Instead, custodial ideas of the Department of Forests making the decisions for people and elites implementing the decisions have simply been reinforced in the new policy context. Therefore, there is a need not only for a deeper understanding and appreciation of the politics in the policy-making and implementation processes of CF, but also for a change in conceptual and ideological assumptions about the role of the state bureaucracy as a facilitator, not as a decision-maker, and the elites as friends of the poor, women and minority groups, not as the friend of the authorities. Major rethinking is needed by which CF is viewed as embedded in the wider system so as to situate CF policy and practices within the imperatives of rural development and poverty alleviation. Only then can the potential of collective action by local communities to manage natural resources effectively be realised.

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